Calamovilfa longifolia - Carex inops ssp. heliophila Herbaceous Vegetation

COMMON NAME	Prairie Sandreed - Long-stolon Sedge Herbaceous Vegetation
SYNONYM	Prairie Sandreed - Sedge Prairie
PHYSIOGNOMIC CLASS	Herbaceous Vegetation (V)
PHYSIOGNOMIC SUBCLASS	Perennial graminoid vegetation (V.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar grassland (V.A.5)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (V.A.5.N)
FORMATION	Tall sod temperate grassland (V.A.5.N.a)
ALLIANCE	CALAMOVILFA LONGIFOLIA HERBACEOUS ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Terrestrial

RANGE

Badlands National Park

The prairie sandreed type occupies the margins of intermittent drainages, where sediments are deposited (analogous to point bars on flowing rivers).

Globally

This community is found in 3 ecoregional sections in Wyoming, Montana, North Dakota, South Dakota, and Saskatchewan.

ENVIRONMENTAL DESCRIPTION

Badlands National Park

Prairie sandreed grassland was found on silt deposits along intermittent drainages. These species are also common components of sand hill sites classified as the Sand Sagebrush Shrubland type.

Globally

Stands are found on gently rolling uplands with little to moderate slopes (typically between 0 and 20%, but occasionally as high as 39%, Hirsch 1985, Hansen and Hoffman 1988). The soils are sand, sandy loam, or loamy sand and there is rarely substantial soil horizon development (Hanson and Whitman 1938). The parent material is sandstone (USFS 1992). Moisture levels may be high deep in the profile.

MOST ABUNDANT SPECIES

Badlands National Park

Stratum	Species

Information not available.

Globally

Stratum	Species
Graminoid	*Calamovilfa longifolia, Carex filifolia, Carex inops ssp heliophila*

CHARACTERISTIC SPECIES

Badlands National Park

Calamovilfa longifolia, *Bouteloua gracilis*, *Stipa comata*, *Melilotus officianalis*

Globally

Calamovilfa longifolia, Carex filifolia, Carex inops ssp *heliophila*

OTHER NOTABLE SPECIES

Globally

Stratum	Species
Graminoid	*Koeleria macrantha, Schizachyrium scoparium, Stipa comata*

VEGETATION DESCRIPTION

Badlands National Park

Small stands of prairie sandreed grasslands are found along intermittent drainages. These are only occasionally observed and are always below the minimum mapping unit of 0.5 hectares. Foliar cover is moderate, ranging from 35-60%. The dominant grass is prairie sandreed (*Calamovilfa longifolia*). Needle-and-thread (*Stipa comata*), sideoats grama (*Bouteloua curtipendula*), and purple threeawn (*Aristida purpurea*) are graminoids that were also observed in this type. Commonly occurring forbs include yellow sweetclover (*Melilotus officianalis*), scurfpea (*Psoralidium tenuiflorum*), and white aster (*Aster ericoides*).

Globally

The vegetation structure is somewhat open, with cover averaging 65 percent in parts of its range (USFS 1992). The vegetation is dominated by graminoids, with two strata, one of mid- to tall-grasses, the other of dense short sedges. In the taller grass layer, the most abundant species is *Calamovilfa longifolia*. Other species found in this layer include *Koeleria macrantha, Schizachyrium scoparium*, and *Stipa comata*. *Pascopyrum smithii* may be present on some stands with finer soil textures. The

short graminoid layer is composed chiefly of *Carex filifolia* and *Carex inops* ssp. *heliophila*, which may have high cover values. Other upland Carices, such as *Carex duriuscula (=Carex eleocharis)*, as well as *Bouteloua gracilis* and *Muhlenbergia pungens*, may also be present. Forb species diversity is moderate, but they do not contribute greatly to the cover (Hanson and Whitman 1938, USFS 1992). The forbs that are typical of this community include *Artemisia dracunculus, Artemisia frigida* (a shrub to some)*, Artemisia ludoviciana, Chenopodium album, Chenopodium leptophyllum, Lathyrus* spp., *Liatris punctata, Lygodesmia juncea, Phlox hoodii*, and *Psoralidium lanceolatum*. Shrubs are uncommon. When shrubs are present they are short shrubs such as *Yucca glauca, Rosa spp*., and *Artemisia frigida* (a forb to some).

CONSERVATION RANK G3. No occurrences have been documented, but the community is reported in 3 ecoregional subsections in Wyoming, Montana, North Dakota, South Dakota, and Saskatchewan. It is a very uncommon community in Badlands National Park, South Dakota.

DATABASE CODE CEGL001471

MAP UNITS This type is not mapped separately on the Badlands NP vegetation map. These small inclusions along drainages are typically placed in Map Class 16, (Western wheatgrass Grassland Alliance), because this is the adjacent vegetation community. On sandhills, this type is placed in Map Class 32 (Sand sagebrush / Prairie sandreed Shrubland).

SIMILAR ASSOCIATIONS
Calamovilfa longifolia - Stipa comata Herbaceous Vegetation

COMMENTS
Badlands National Park
Calamovilfa longifolia - Stipa comata Herbaceous Vegetation (CEGL001473) may be an equally good fit.

Prairie sandreed grasslands are uncommon in Badlands NP and are classified under larger, more encompassing vegetation map units. A few sites were sampled during the course of field work at the Park, to help describe grassland variability.

REFERENCES
Hansen, P.L. 1985. An ecological study of the vegetation of the Grand River/Cedar River, Sioux, and Ashland Districts of the Custer National Forest. Unpublished dissertation, South Dakota State University. 257 pp.